



Australian Bureau of Statistics

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Summary

Contents



Feature Articles

[Energy Consumption in South Australia](#)

Demography

Includes: **Estimated resident population, Components of population change**
South Australia's population increased 1.1% during the year ended 30 June 2008.

Labour Force

Includes: **Contents, Employed persons, Unemployment, Participation rate**
South Australia's unemployment rate rose slightly to 5.4% in November 2008.

Incomes

Includes: **Average weekly earnings**

Average weekly earnings for South Australian males increased 5.0% in the year to August 2008, while female earnings increased 3.3%.

State Accounts

Includes: **State accounts, Household final consumption expenditure (HFCE)**

South Australia's State Final Demand increased by 1.0% in the September quarter 2008.

Consumption

Includes: **Retail trade, New motor vehicle sales**

South Australia's retail turnover increased by 0.5% in October 2008.

Investment

Includes: **Private new capital expenditure, Mineral and petroleum exploration expenditure**

South Australia's Private New Capital Expenditure increased by 2.7% to \$1,363m in the September 2008 quarter.

Construction

Includes: **Building approvals, Construction work done**

The total number of dwelling units approved in South Australia decreased by 3.0% from September 2008 to October 2008.

Price Indexes

Includes: **Contents, Consumer price index, Wage price index, House price index**

The house price index for Adelaide rose 9.7% in the year to the September quarter 2008.

Housing Finance

Includes: **Housing finance commitments**

Total value of housing finance commitments (owner occupier) in South Australia has decreased eleven months in a row.

International Merchandise Trade

Includes: **Exports and Imports**

The value of South Australia's merchandise exports was \$890m in October 2008 (up 2.7% from September 2008).

Water

Includes: **Rainfall, Reservoir levels**

Total water storage in Adelaide's reservoirs was at 74% of capacity at the beginning of December 2008.

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NOTES

FORTHCOMING ISSUES

ISSUE	Release Date
January 2009	27 January 2009
February 2009	27 February 2009
March 2009	31 March 2009
April 2009	28 April 2009
May 2009	26 May 2009

WHAT'S NEW THIS MONTH

Topics which have been updated with new data in this month's issue of **SA Stats** include: Demography; State Accounts; Consumption; Investment; Construction; Labour Force; International Merchandise Trade; Housing Finance and Water.

This month's **SA Stats** includes a new article on Energy Consumption in South Australia. This article looks at changes in energy consumption in South Australia and Australia since 1989-90, and how this relates to the size of the population and the structure of the economy.

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or James Inglis on Adelaide (08) 8237 7405, or email sa.statistics@abs.gov.au.

Feature Articles



FEATURE ARTICLES

- Dec 2008 Energy Consumption in South Australia
- Nov 2008 Adelaide's Population Turnover
- Oct 2008 Contributors to Adelaide's Price Rises
- Sep 2008 Adelaide's Suburbs of Advantage and Disadvantage
- Aug 2008 South Australia's Agriculture Industry
- July 2008 New Dwelling Approvals in South Australia
- May 2008 Literacy of South Australians

April 2008	<u>South Australia's Migrant Population</u> <u>South Australia's Ageing Population and the Labour Force</u>
Feb 2008	<u>South Australia's Mining Industry</u> <u>Water Supply in South Australia</u>
Jan 2008	<u>Labour Force Underutilisation and the Underemployed in South Australia</u> <u>Water Use in Agriculture - A South Australian Perspective</u>
2007	
Nov 2007	<u>Sports Attendance in South Australia</u> <u>Recorded Crime - Victims, South Australia, 2006</u>
Oct 2007	<u>Attendance at Cultural Venues and Events by South Australians</u>
Aug 2007	<u>Children's Participation in Cultural and Leisure Activities - South Australia, 2006</u>
Jul 2007	<u>South Australia's big picture: Census highlights the changes in South Australian society</u> <u>Participation in Sports and Physical Recreation Activities - South Australia</u>
May 2007	<u>Health of South Australians - Body Mass</u> <u>Household Use of the Internet in South Australia</u>
Apr 2007	<u>Employment in the Retail Trade Industry in South Australia</u> <u>River Murray - South Australia</u>
Mar 2007	<u>Household Waste Management in South Australia</u>
Feb 2007	<u>Births - South Australia</u>
Jan 2007	<u>Gross Domestic Product and Gross State Product</u>
2006	
Dec 2006	<u>Rainfall in South Australia, South Australian Reservoirs, Water Consumption</u>
Nov 2006	<u>Health of South Australians - Health related actions</u>
Oct 2006	<u>National Regional Profile - New Release, New Features</u>
Sep 2006	<u>Fuel Production and Consumption, Greenhouse Gas Emissions, Land Use Change and Forestry</u>
Aug 2006	<u>Health of South Australians - Health Risk Behaviours</u> <u>The South Australian Grape Industry</u>
Jul 2006	<u>Use of IT By Australian Businesses</u> <u>Household use of the Internet in South Australia</u>
May 2006	<u>Health of South Australians - Health Status</u>
Apr 2006	<u>International Trade in Services</u> <u>International Students in South Australia</u>
Feb 2006	<u>Labour Force and Other Characteristics of Migrants in South Australia</u>
Jan 2006	<u>Survey of work in selected Culture & Leisure Activities</u>
2005	
Nov 2005	<u>Household Income in South Australia</u> <u>Household Expenditure in South Australia</u>
Oct 2005	<u>SA Business and Innovation</u> <u>Recent History of Population change in South Australia, 1993-94 to 2003-04</u>
Aug 2005	<u>Average Weekly Earnings</u> <u>Transition from School</u>

Demography



DEMOGRAPHY

ESTIMATED RESIDENT POPULATION

The estimated resident population (ERP) for South Australia was 1,601,800 at 30 June 2008, an increase of about 17,600 persons (1.1%) since 30 June 2007. Nationally, the ERP was 21,374,000 at 30 June 2008, an increase of about 359,000 persons (1.7%) since 30 June 2007.

ESTIMATED RESIDENT POPULATION, Preliminary data

	Population at end June quarter 2008 '000	Change over previous year '000	Change over previous year %
New South Wales	6 967.2	79.2	1.1
Victoria	5 297.6	92.7	1.8
Queensland	4 279.4	98.0	2.3
South Australia	1 601.8	17.6	1.1
Western Australia	2 163.2	57.1	2.7
Tasmania	498.2	4.8	1.0
Northern Territory	219.9	5.0	2.3
Australian Capital Territory	344.2	4.5	1.3
Australia(a)	21 374.0	359.0	1.7

(a) Includes Other Territories comprising Jervis Bay Territory, Christmas Island and the Cocos (Keeling) Islands.
Source: Australian Demographic Statistics (cat. no. 3101.0).

In 2006-07, the South Australian Statistical Division (SD) with the largest increase in ERP was Outer Adelaide (2.0%) followed by Adelaide (1.1%).

ESTIMATED RESIDENT POPULATION, By Statistical Division, South Australia(a)

	2006		2007	
	Population at 30 June '000	Change over previous year %	Population at 30 June '000	Change over previous year %
Adelaide	1 146.1	1.0	1 158.3	1.1
Outer Adelaide	128.9	2.4	131.5	2.0
Yorke and Lower North	45.6	0.9	46.0	0.9
Murray Lands	69.5	0.5	69.8	0.4
South East	64.6	0.7	65.0	0.5
Eyre	34.8	0.4	34.9	0.4
Northern	78.7	-0.2	79.2	0.6
South Australia	1 568.2	1.0	1 584.5	1.0

(a) Estimates for 2007 are preliminary.
Source: Regional Population Growth, Australia 2006-07 (cat. no. 3218.0)

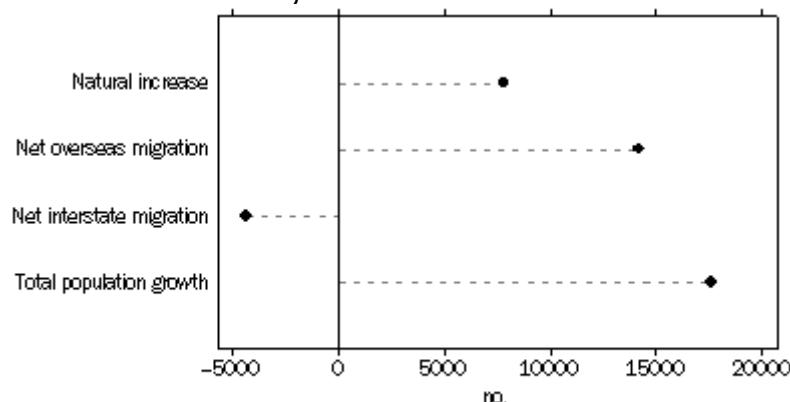
[Map of South Australia's Statistical Divisions\(PDF 2.44MB\)](#)

COMPONENTS OF POPULATION CHANGE

For the year ended 30 June 2008, South Australia recorded a natural increase (i.e. the net of births and deaths) of 7,793 persons. Net overseas migration provided a gain of 14,186 persons in the same period while net interstate migration realised a loss of 4,335 persons.

For the year ended 30 June 2008, Australia recorded a natural increase in population of 145,495 persons; net overseas migration resulted in a gain of 213,461 people.

POPULATION GROWTH, South Australia - Year ended June 2008



Source: Australian Demographic Statistics (cat. no. 3101.0)

Labour Force



LABOUR FORCE

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[Employed persons](#)

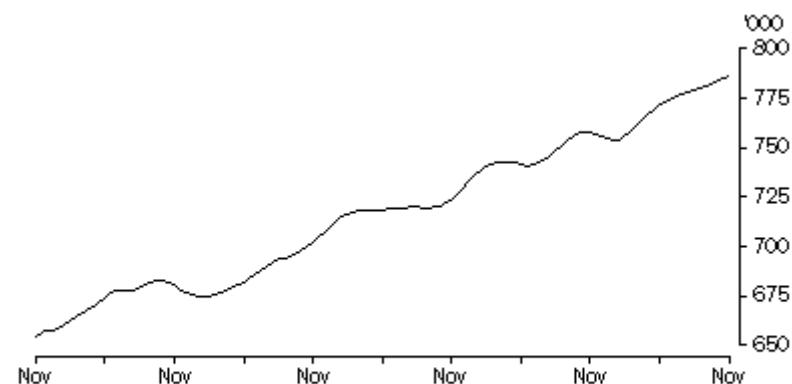
[Unemployment](#)

[Participation rate](#)

EMPLOYED PERSONS

In trend terms, the total number of persons employed in South Australia in November 2008 was 785,900, an increase of 1,000 from the number of persons employed in October 2008 (784,900). The total number of persons employed in Australia in November 2008 was 10,756,800, an increase of 8,300 on the number employed in October 2008 (10,748,500).

EMPLOYED PERSONS, Trend, South Australia



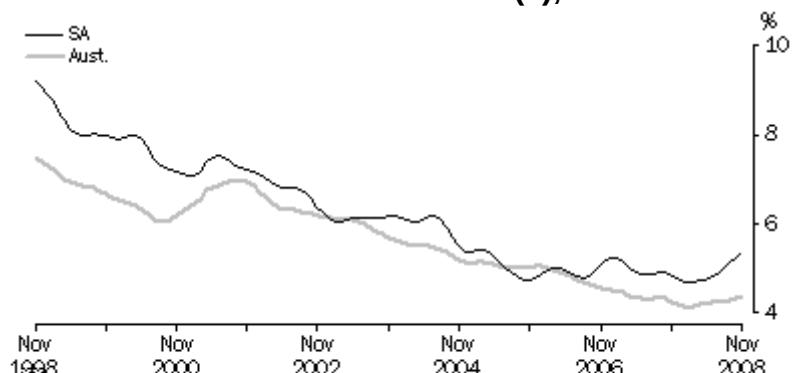
Source: Labour Force, Australia (cat. no. 62020)

The number of males employed full-time in South Australia in November 2008 was 365,200 (in trend terms), an increase from 364,200 in October 2008. The number of females employed full-time in South Australia in November 2008 was 174,600 (in trend terms), a decrease from 176,500 in October 2008.

UNEMPLOYMENT

The trend estimate unemployment rate for South Australia rose slightly to 5.4% in November 2008, up from 5.3% in October 2008. Australia's unemployment rate remained unchanged from October 2008 to November 2008 at 4.3%.

UNEMPLOYMENT RATE(a), Trend

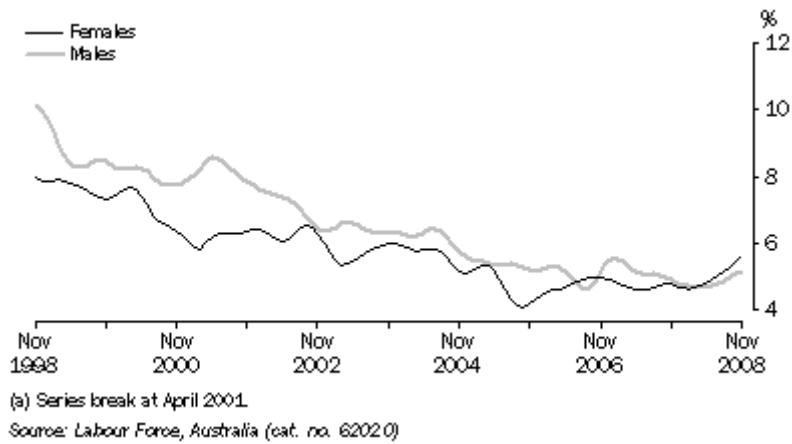


(a) Series break at April 2001.

Source: Labour Force, Australia (cat. no. 62020)

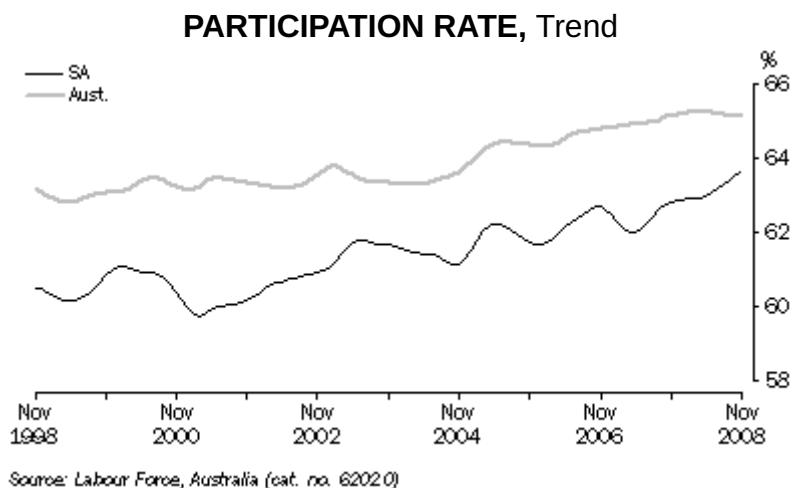
For South Australia, the trend unemployment rate for males rose slightly from 5.1% in October 2008 to 5.2% in November 2008. The trend unemployment rate for females in South Australia rose slightly from 5.5% in October 2008 to 5.6% in November 2008.

UNEMPLOYMENT RATE(a), Trend, South Australia



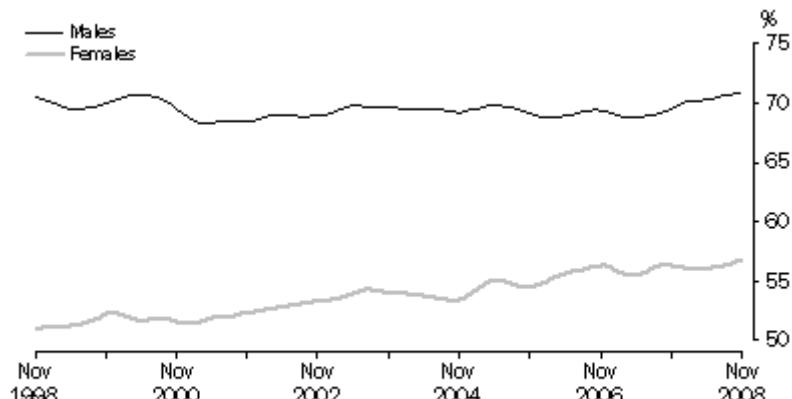
PARTICIPATION RATE

The trend estimate of the participation rate for South Australia in November 2008 was 63.7%, up slightly from 63.6% in October 2008. Australia's trend participation rate remained constant from October 2008 to November 2008 at 65.1%.



For South Australia, the trend participation rate for males rose slightly to 70.9% in November 2008, up from 70.8% in October 2008. The Australian participation rate for males remained unchanged from October 2008 to November 2008 at 72.2%. The participation rate for South Australian females rose slightly from 56.6% in October 2008 to 56.7% in November 2008. The Australian female participation rate remained steady over this period at 58.3%.

PARTICIPATION RATE, Trend, South Australia



Source: Labour Force, Australia (cat. no. 6202.0)

Incomes



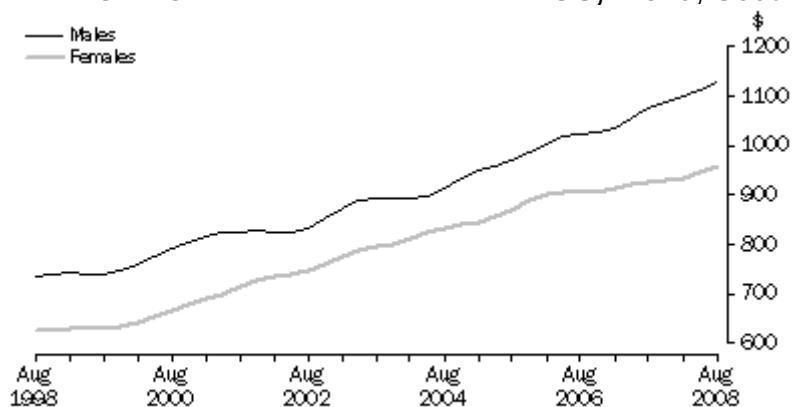
INCOMES

AVERAGE WEEKLY EARNINGS

The trend estimate of average weekly (ordinary time) earnings for full-time adult persons in South Australia increased by 4.3% to \$1,067.60 in the 12 months to August 2008. Nationally, the corresponding increase was slightly higher at 4.5% (up to \$1,145.10).

In the 12 months to August 2008, average weekly earnings in South Australia for males increased by 5.0% to \$1,126.60. Nationally, male average weekly earnings increased 4.9% to \$1220.60. Female average weekly earnings in South Australia increased by 3.3% to \$958.70 in the 12 months to August 2008, compared with a national increase of 4.4% to \$1017.20.

FULL-TIME ADULT ORDINARY TIME EARNINGS, Trend, South Australia



Source: Average Weekly Earnings, Australia (cat. no. 6302.0)

For information on the wage price index, please refer to the '[Price Indexes](#)' topic.

State Accounts



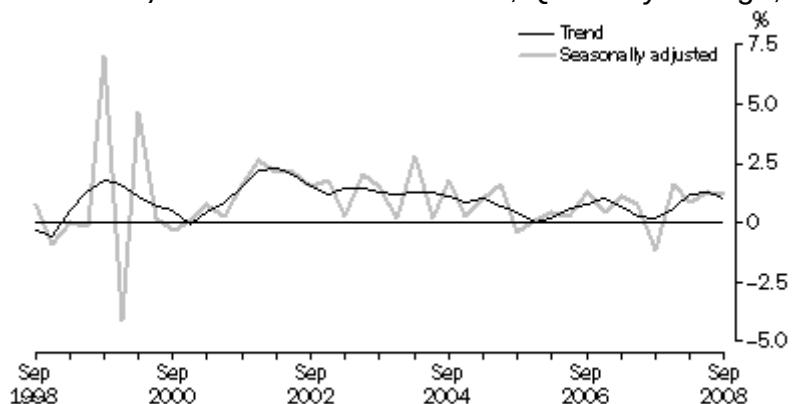
STATE ACCOUNTS

STATE ACCOUNTS

South Australia's September quarter 2008 State Final Demand in chain volume (trend) terms was \$18,737m, a 1.0% increase from the June quarter 2008. Australia's Domestic Final Demand increased 0.7% in the September quarter 2008, to \$284,293m.

Of the other states and territories, the strongest growth for the quarter was reported in the Northern Territory (up 2.8%) followed by Western Australia (up 2.1%).

STATE FINAL DEMAND, Chain volume measures, Quarterly change, South Australia

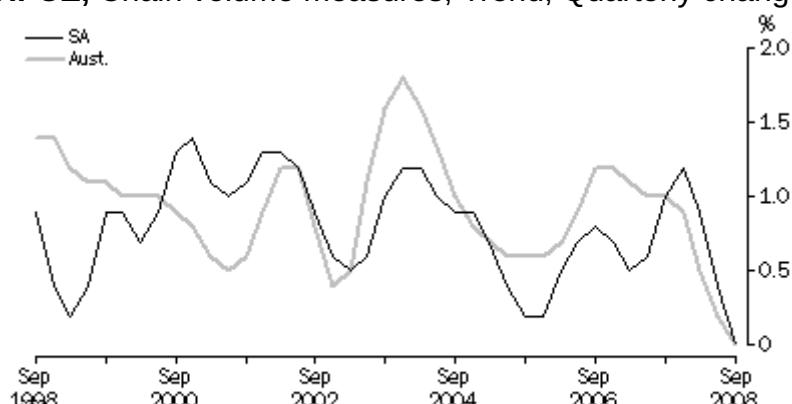


Source: Australian National Accounts: National Income, Expenditure and Product (cat. no. 5206.0)

HOUSEHOLD FINAL CONSUMPTION EXPENDITURE (HFCE)

In chain volume (trend) terms, South Australia's September quarter 2008 HFCE was \$10,838m (7.1% of the national total of \$152,462m). The value of HFCE was unchanged from the June quarter 2008 for South Australia. For Australia, HFCE was virtually unchanged from the June quarter 2008.

HFCE, Chain volume measures, Trend, Quarterly change

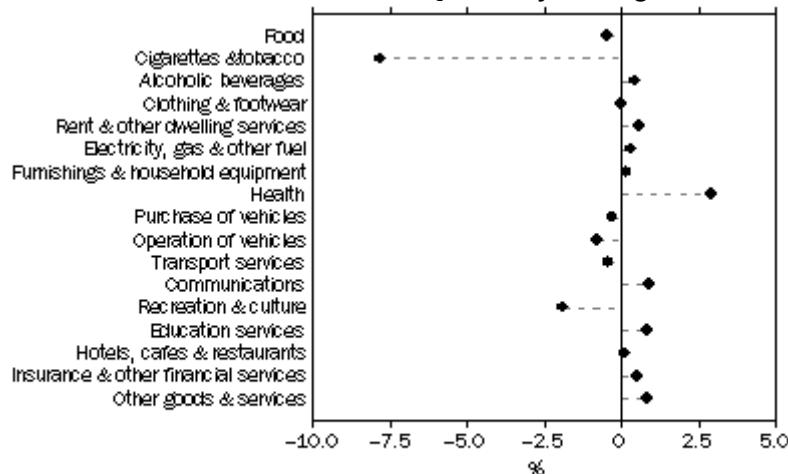


Source: Australian National Accounts: National Income, Expenditure and Product (cat. no. 5206.0)

The largest increases in expenditure in South Australia for the September quarter 2008 were for Health (up 2.9% from the June quarter 2008), and Communications (up 0.9%). Expenditure on Cigarettes and tobacco decreased by 7.8% over this period.

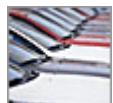
For Australia, the largest increase was for Alcoholic beverages (up 0.9% from the June quarter 2008) followed by Insurance and other financial services (up 0.8%) and Health (up 0.7%). Expenditure on Purchase of vehicles decreased 3.6% from the June quarter 2008.

HFCE, Chain volume measures, Trend, Quarterly change, SA - Sep Qtr 2008



Source: Australian National Accounts: National Income, Expenditure and Product (cat. no. 5206.0)

Consumption



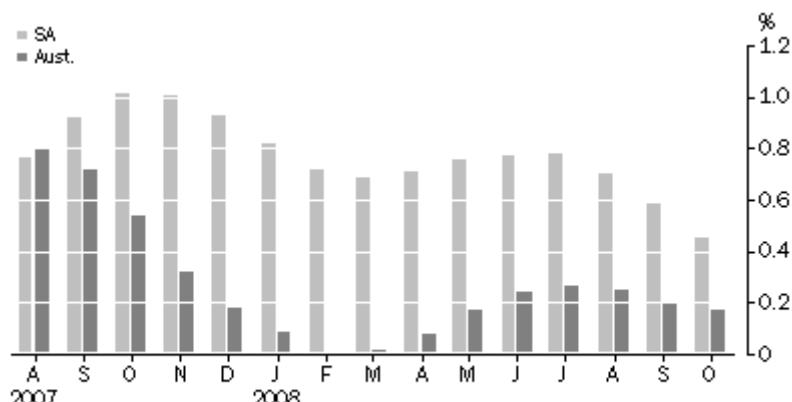
CONSUMPTION

RETAIL TRADE

The October 2008 trend estimate for South Australia's retail turnover was \$1,345.4m, while the estimate for Australia was \$18,396.1m. South Australia's contribution to total retail turnover in Australia in October 2008 remained unchanged at 7.3%.

From September 2008, the increase in retail turnover for South Australia across all retail industries was 0.5%, while turnover for Australia grew by 0.2%. This represents the 14th consecutive month that retail turnover in South Australia has grown faster than the Australian rate. This is the longest period of outperformance since September 2002.

RETAIL TURNOVER AT CURRENT PRICES, Trend, Change from previous month

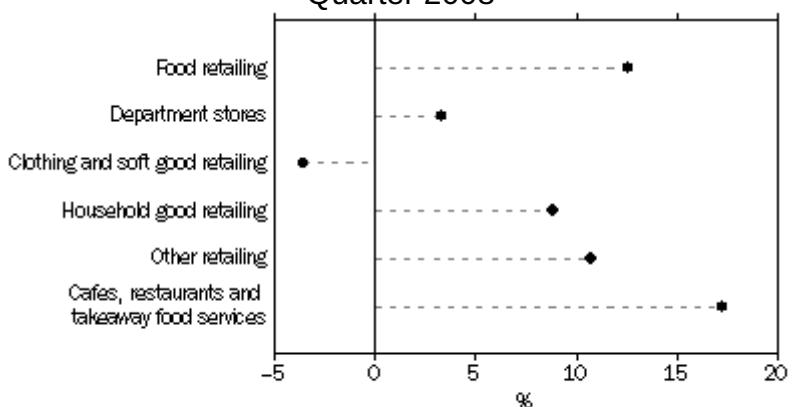


Source: Retail Trade Trends, Australia (cat. no. 8501.0)

Comparing the September quarter 2008 with the September quarter 2007, the two South Australian industry groups with the largest percentage increases in retail turnover (in trend terms) were Cafes, restaurants and takeaway food services, rising by 17.2% to \$445.1m, and Food retailing, rising by 12.6% to \$1,720.7m.

The only South Australian industry group to report a decrease in retail turnover was Clothing and soft good retailing, which decreased by 3.5% to \$187.6m.

RETAIL TURNOVER, Trend, Change over previous year, South Australia - September Quarter 2008



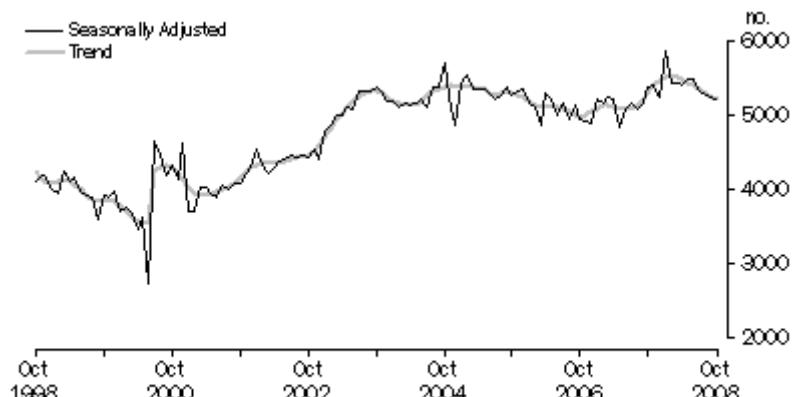
Source: Retail Trade Quarterly Indicators, Australia (cat. no. 8502.0)

NEW MOTOR VEHICLE SALES

In October 2008, 3,118 new passenger vehicles and 5,220 new vehicles in total (in trend terms) were sold in South Australia. The trend estimate for total new vehicle sales in South Australia has continually decreased since March 2008.

In Australia, there were 47,117 new passenger vehicles sold in October 2008 and 80,030 new vehicles in total (in trend terms). The trend estimate for total new vehicle sales in Australia has continually decreased since January 2008.

NEW MOTOR VEHICLE SALES, South Australia



Source: Sales of New Motor Vehicles, Australia (cat. no. 9304.0)

Investment



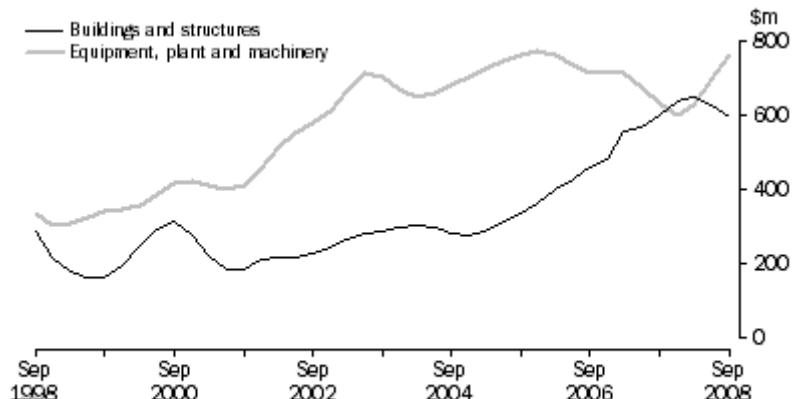
INVESTMENT

PRIVATE NEW CAPITAL EXPENDITURE

Between the June 2008 and September 2008 quarters, the South Australian chain volume (trend) estimate of private new capital expenditure increased by 2.7% to \$1,363m. Expenditure on Equipment, plant and machinery increased by \$69m (or 9.9%) to \$766m, while expenditure on Buildings and structures decreased by \$33m (or 5.2%) to \$597m.

Between the June 2008 and September 2008 quarters, private new capital expenditure for Australia increased by 2.9% to \$23,377m. Expenditure on Equipment, plants and machinery increased by 2.4%, while Buildings and structures expenditure increased by 3.1% over this period.

PRIVATE NEW CAPITAL EXPENDITURE, Chain volume measures, Trend, South Australia



Source: Private New Capital Expenditure and Expected Expenditure, Australia (cat. no. 5625.0)

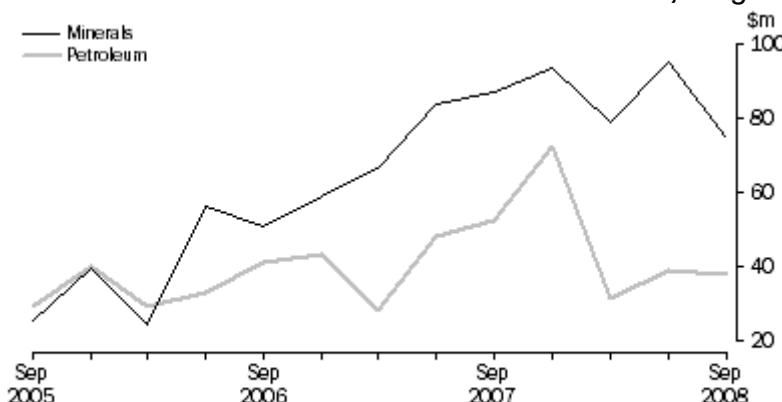
MINERAL AND PETROLEUM EXPLORATION EXPENDITURE

The value of mineral exploration expenditure in South Australia during the September quarter 2008 was \$75.0m (in original terms), down 21.2% from \$95.2m for the June quarter 2008. Over the same period, Australian expenditure on mineral exploration decreased by 5.5% from \$728.1m in the June quarter 2008 to \$687.7m in the September quarter 2008.

The main minerals sought in South Australia in the September quarter 2008 were copper (\$28.5m exploration expenditure), uranium (\$22.4m), and gold (\$13.6m).

Expenditure on petroleum exploration in South Australia in the September quarter 2008 was \$37.9m, down 3.5% from the June quarter 2008. Nationally, expenditure on petroleum exploration decreased 8.9% from \$857.2m in the June quarter 2008 to \$781.3m in the September quarter 2008.

MINERAL AND PETROLEUM EXPLORATION EXPENDITURE, Original, South Australia



Source: *Mineral and Petroleum Exploration, Australia* (cat. no. 8412.0)

Construction



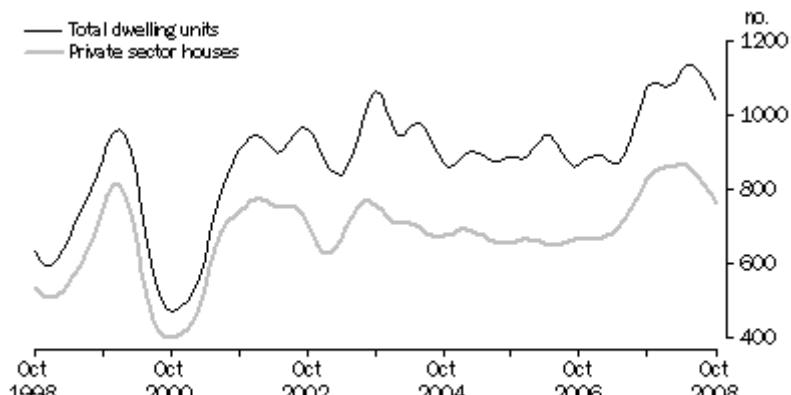
CONSTRUCTION

BUILDING APPROVALS

In October 2008, the total number of dwelling units approved in South Australia (in trend terms) fell 3.0% to 1,040. Nationally, the total number of dwelling units approved (in trend terms) fell 3.8% to 11,036.

The trend estimate for the number of private sector houses approved in South Australia in October 2008 fell 3.2% to 764. This was the sixth consecutive monthly fall.

DWELLING UNITS APPROVED, Trend, South Australia



Source: Building Approvals, Australia (cat. no. 8731.0)

In the year ended October 2008, the largest percentage increase in dwelling units approved in South Australia was recorded for the South East Statistical Division (SD) (46.4%). This follows a 6.5% fall in the number of dwelling units approved in the South East SD in the year ending October 2007. The Murray Lands SD recorded the largest percentage decrease in dwelling units approved in the year ended October 2008 (down 21.8%), following a 42.1% increase during the year ended October 2007.

DWELLING UNITS APPROVED, by Statistical Division (SD), Original, South Australia

	Year ended October 2007		Year ended October 2008	
	Dwelling units no.	Change over previous year %	Dwelling units no.	Change over previous year %
Adelaide	7 739	-0.6	8 940	15.5
Outer Adelaide	1 616	6.2	1 747	8.1
Yorke and Lower North	524	2.3	620	18.3
Murray Lands	665	42.1	520	-21.8
South East	375	-6.5	549	46.4
Eyre	251	-0.4	333	32.7
Northern	438	31.1	521	18.9
South Australia	11 608	2.9	13 230	14.0

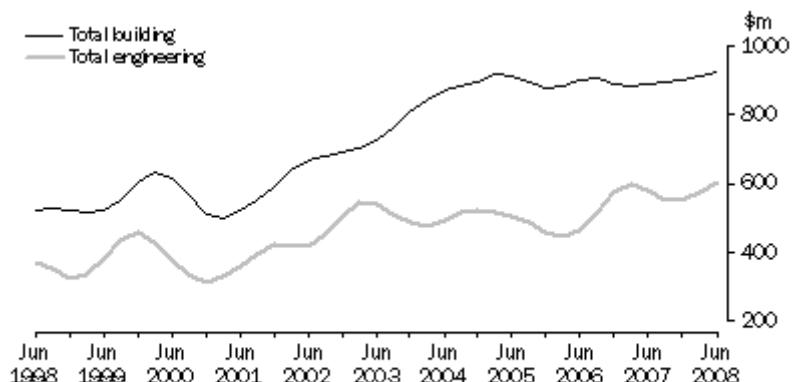
Source: Building Approvals, Australia - data available on request

[Map of South Australia's Statistical Divisions \(PDF 2.44MB\)](#)

CONSTRUCTION WORK DONE

In the June quarter 2008, the total value of building work done (in trend terms) in South Australia was \$923.3m, an increase of 0.8% from \$916.4m for the March quarter 2008. Engineering work done in the June quarter 2008 was \$603.4m, an increase of 5.0% from the March quarter 2008 (\$574.8m).

VALUE OF CONSTRUCTION WORK DONE, Chain volume measures, Trend, South Australia



Source: Building Activity, Australia (cat. no. 8752.0), Engineering Construction Activity, Australia (cat. no. 8762.0)

Price Indexes



PRICE INDEXES

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[Consumer price index](#)

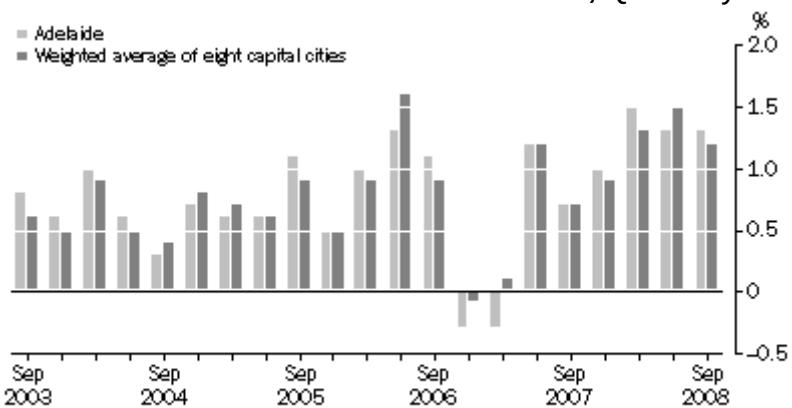
[Wage price index](#)

[House price index](#)

CONSUMER PRICE INDEX

The all groups consumer price index (CPI) for Adelaide rose 1.3% in the September quarter 2008 while the weighted average of the eight capital cities rose by 1.2% in that quarter. Adelaide's CPI increased by 5.1% in the year ending September quarter 2008, compared with a 5.0% rise in the weighted average of the eight capital cities.

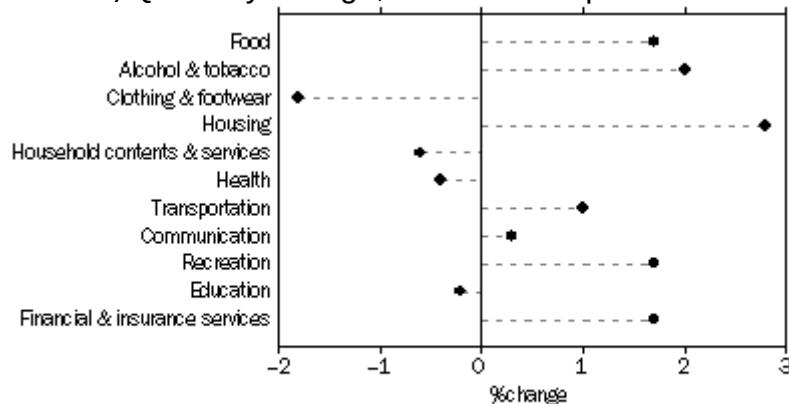
CONSUMER PRICE INDEX - ALL GROUPS, Quarterly change



Source: Consumer Price Index, Australia (cat. no. 6401.0)

Adelaide's largest percentage increases in prices from the previous quarter were in the areas of Housing (2.8%), Alcohol and tobacco (2.0%), Food (1.7%), Recreation (1.7%) and Financial and insurance services (1.7%). The largest decreases in prices from the previous quarter were for Clothing and footwear (-1.8%) and Household contents and services (-0.6%).

CPI GROUPS, Quarterly change, Adelaide - September 2008 quarter

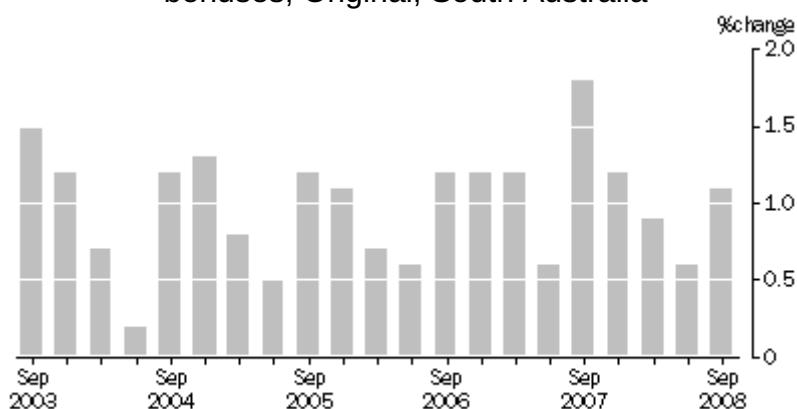


Source: Consumer Price Index, Australia (cat. no. 6401.0)

WAGE PRICE INDEX

The wage price index for all employee jobs in South Australia increased by 1.1% (in original terms) from the June quarter 2008 to the September quarter 2008. This was less than the increase nationally (1.2%) over this period.

WAGE PRICE INDEX QUARTERLY CHANGES, Total hourly rates of pay excluding bonuses, Original, South Australia



Source: Labour Price Index, Australia (cat. no. 6345.0)

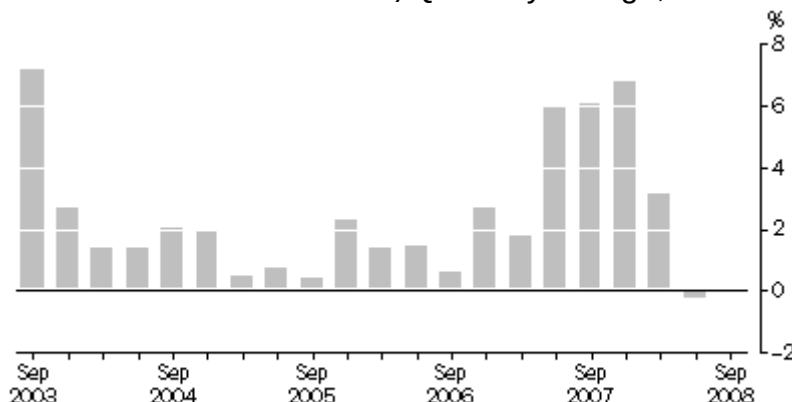
HOUSE PRICE INDEX

Preliminary estimates show that the price index for established houses for Adelaide (in original terms) decreased 0.1% in the September quarter 2008. Over this period, the price index for the weighted average of the eight capital cities decreased by 1.8%.

Over the year to the September quarter 2008, the preliminary estimates show the price index for established houses for Adelaide rose 9.7%, while the weighted average of the

eight capital cities increased 2.8%. House prices increased faster in Adelaide than in any other capital city over the year to the September quarter 2008.

ESTABLISHED HOUSE PRICES, Quarterly change, South Australia



Source: House Price Indexes: Eight Capital Cities (cat. no. 6416.0)

Housing Finance

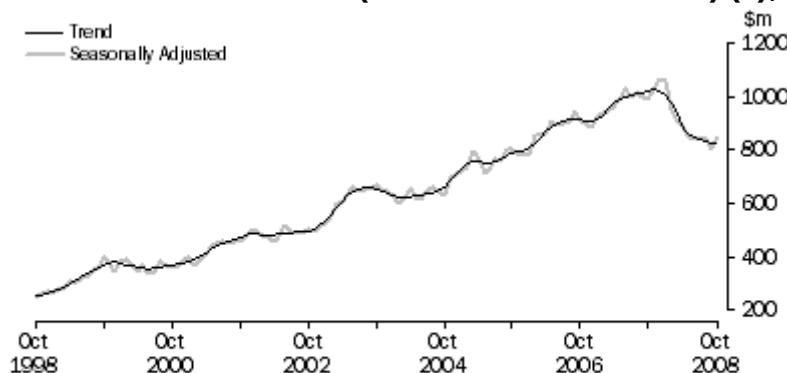


HOUSING FINANCE

HOUSING FINANCE COMMITMENTS

In trend terms, the total value of housing finance commitments (owner occupation) in South Australia in October 2008 was \$825m, a decrease of 0.2% from \$827m in September 2008. This was the eleventh consecutive monthly fall in the value of housing finance commitments (owner occupation). Nationally, the value of housing finance commitments for owner occupation fell by 0.3% from \$12,063m in September 2008 to \$12,029m in October 2008.

HOUSING FINANCE COMMITMENTS (OWNER OCCUPATION) (a), South Australia



(a) Excludes alterations and additions. Includes refinancing.

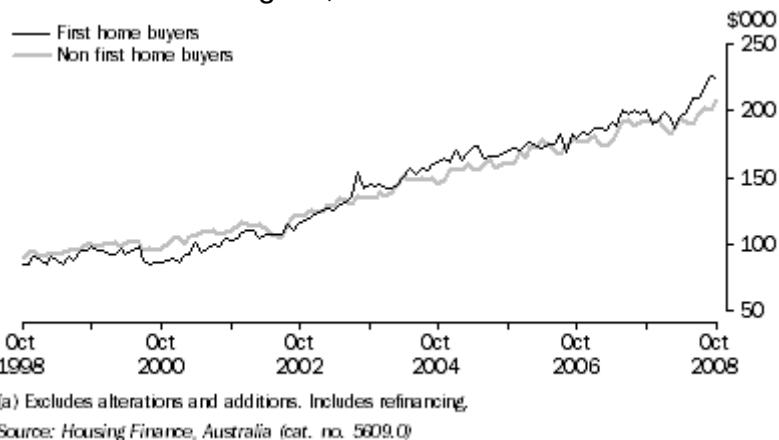
Source: Housing Finance, Australia (cat. no. 5609.0)

In October 2008, the average home loan size for owner occupied dwellings in South Australia was \$210,000, which was significantly lower than the average home loan size for Australia (\$256,400). Over the past year, there has been some growth in the average loan

size for owner occupied dwellings in South Australia; the average loan size in October 2008 (\$210,000) was 8.4% higher than that of October 2007 (\$193,700).

In October 2008, the average loan size for first home buyers in South Australia was \$224,700, which was 8.4% higher than the average loan size for non-first home buyers (\$207,300). From September 2008 to October 2008, the average loan size for first home buyers decreased by 0.4%, while the average loan size for non-first home buyers increased by 3.2%.

HOUSING FINANCE COMMITMENTS (OWNER OCCUPATION) (a), Average loan size, Original, South Australia



(a) Excludes alterations and additions. Includes refinancing.
Source: *Housing Finance, Australia* (cat. no. 5609.0)

For information on the house price index, please refer to the '[Price Indexes](#)' topic.

International Merchandise Trade



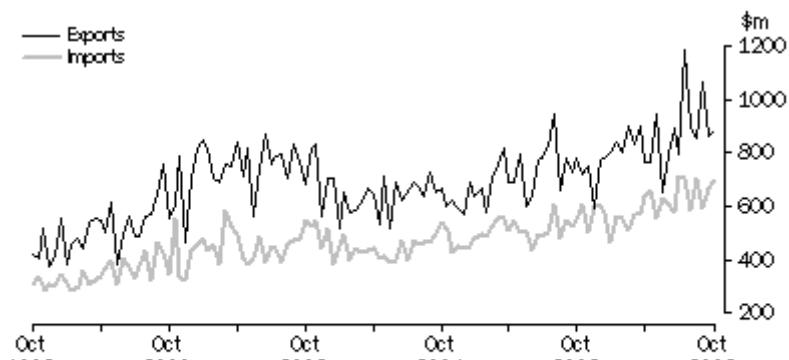
INTERNATIONAL MERCHANDISE TRADE

EXPORTS AND IMPORTS

South Australia's value of exports on a recorded trade basis in October 2008 was \$890m. This represents an increase of 2.7% from September 2008 (\$867m) and 16.1% from October 2007 (\$766m). The value of Australian merchandise exports for October 2008 was \$24,172m, a 76.6% increase from the previous year (\$13,689m in October 2007).

The value of South Australian merchandise imports increased to \$696m in October 2008 from \$640m in October 2007, an increase of 8.9%. The value of Australian merchandise imports for October 2008 was \$21,906m, a 26.1% increase from October 2007 (\$17,378m).

VALUE OF INTERNATIONAL MERCHANDISE EXPORTS AND IMPORTS (a), on a recorded trade basis, South Australia



(a) Exports where the final stage of production or manufacture occurs in South Australia.
Source: International Trade in Goods and Services, Australia (cat. no. 5368.0)

Water

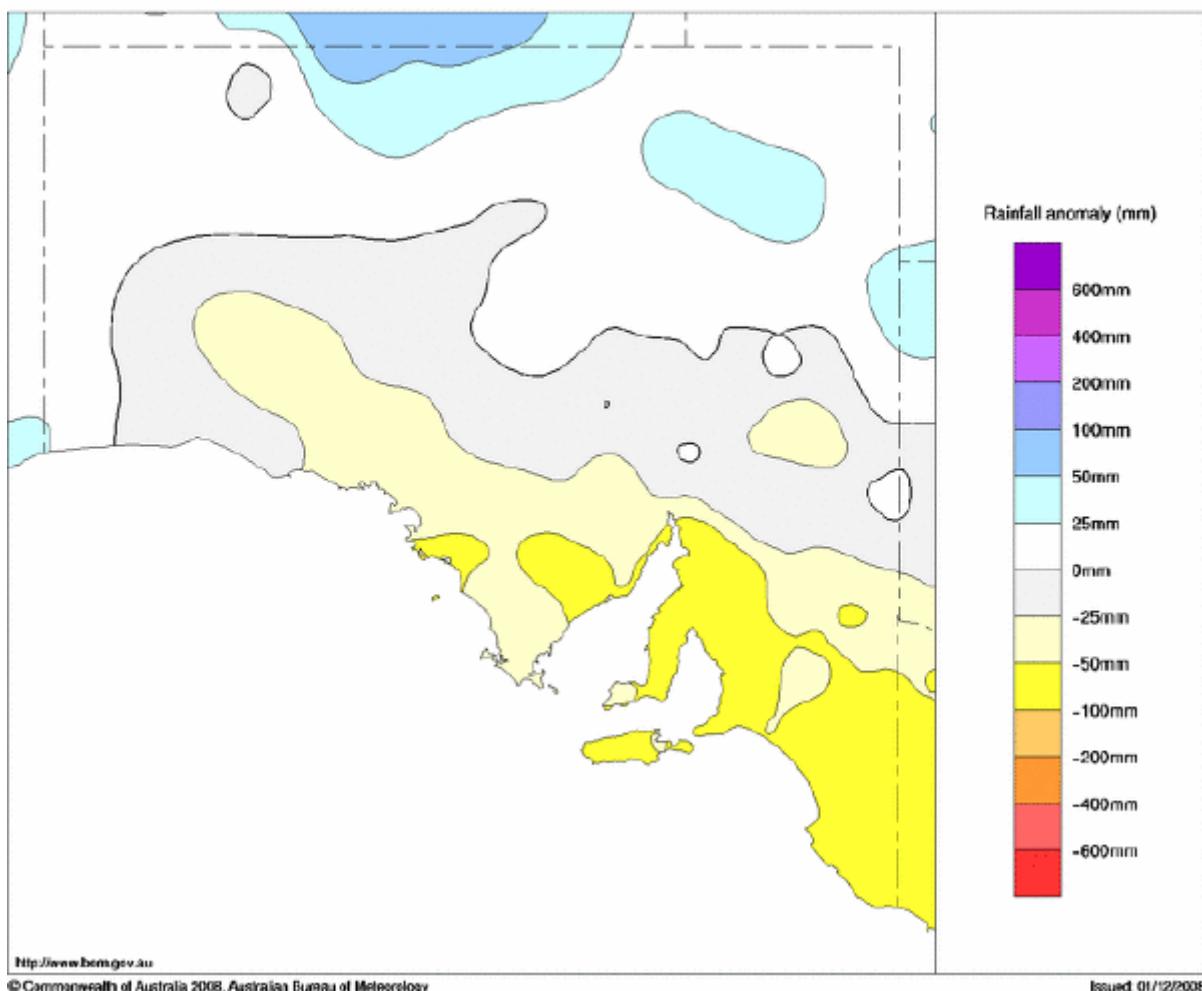


WATER

RAINFALL

Spring rainfall for South Australia ranged from below average to above average. The south-eastern part of the state and Eyre Peninsula received below average falls. In the north and far west of the state rainfall ranged from slightly above to slightly below average, except for some parts in the far north which received rainfall considerably above average.

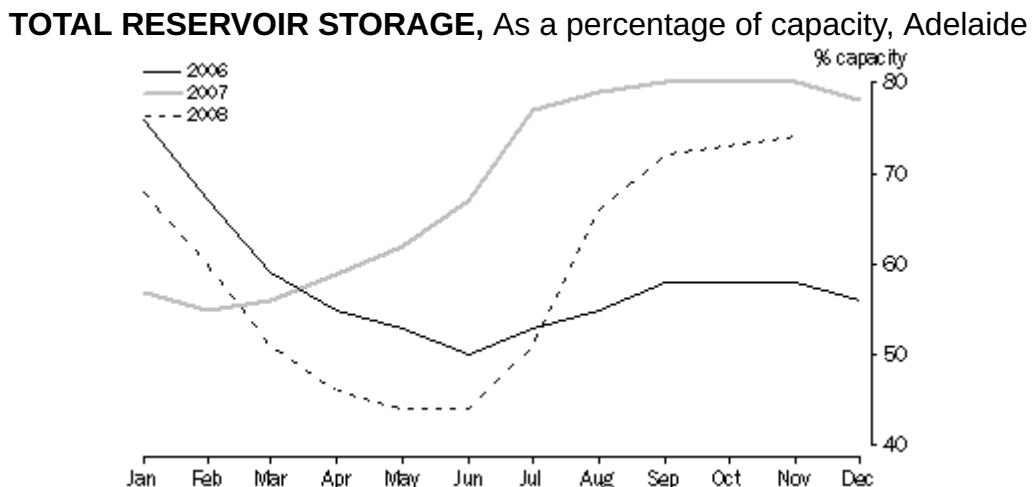
South Australian Rainfall Anomalies 1 September to 30 November 2008
Product of the National Climate Centre



Source:3-monthly rainfall anomalies for South Australia, Australian Bureau of Meteorology.

RESERVOIR LEVELS

The total water storage in Adelaide's reservoirs at the end of November 2008 was 74% of capacity, compared to 80% at the same time in 2007.



Source:SA Water daily reservoir levels

About this Release

SA Stats provides an overview of the South Australian population and economy. The publication is updated on a monthly basis, with most releases also featuring an article that provides a South Australian focus on economic, social and environmental issues.

Explanatory Notes are not included in SA Stats in the form found in other Australian Bureau of Statistics (ABS) publications. Readers are directed to the Explanatory Notes contained in related ABS publications.

Replaces: South Australian Economic Indicators (cat. no. 1307.4)

Energy Consumption in South Australia (Feature Article)

FEATURE ARTICLE: ENERGY CONSUMPTION IN SOUTH AUSTRALIA

INTRODUCTION

As populations increase and economies grow, the demand for energy generally grows. Changes in energy demand are also affected by movements to and from energy intensive activities, changes to fuel input choices and changes to alternative, efficient technical practices. With increasing public, media and policy discussion on energy, it is important to measure and understand the changes in energy consumption and the factors contributing to this.

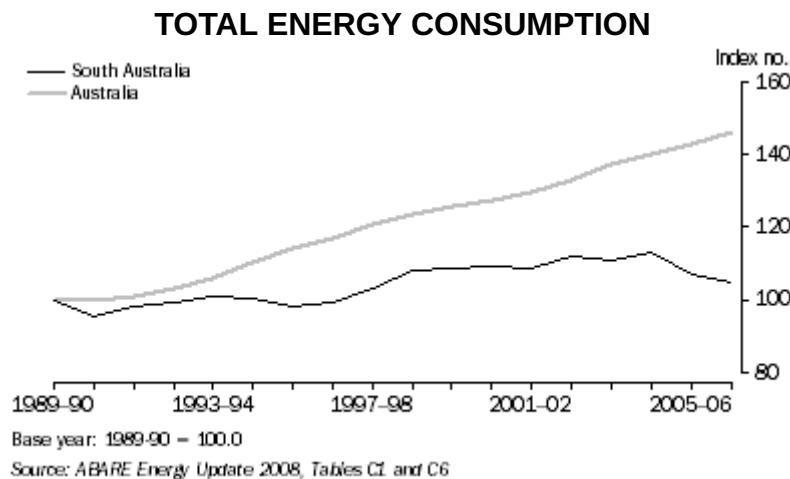
This article examines South Australia's energy consumption over the period 1989-90 to 2006-07 using data from the Australian Bureau of Agricultural and Resource Economics (ABARE) and the Australian Bureau of Statistics (ABS). The article looks at how energy consumption has changed in South Australia and Australia with reference to population and economic growth, and to the structure of the economy. It shows that slower population growth and increased activity in industries with low energy needs have contributed to a slower increase in energy consumption in South Australia than in other states.

TOTAL ENERGY CONSUMPTION

Total energy consumption (TEC) as defined by ABARE (2008) is a measure of energy usage. It is a net concept, being the difference between the gross amount of energy provided by the use of fuels and the amount of energy contained in manufactured, or derived fuels. In order to avoid double counting, the energy used to produce energy products (consumed in other sectors) does not count toward the estimate of total energy consumed in the sector where the products are produced.

Relative to 1989-90 levels, TEC in South Australia did not increase as rapidly as, nor to the extent of, that for the nation. South Australia's TEC increased by 5.1% between 1989-90 and 2006-07, while TEC for Australia increased by 46.2%. South Australia had the lowest TEC growth rate of all the states and territories over this period. As a result, South

Australia's share of the national TEC has decreased from 7.7% in 1989-90 to 5.5% in 2006-07.



Between 1989-90 and 2006-07, the states and territories with the largest percentage increases in TEC were the Northern Territory (108.2% increase), Western Australia (93.7%) and Queensland (89.2%). As shown in the next section of this article, these states and territories experienced much higher population and economic growth between 1989-90 and 2006-07 compared to South Australia.

TOTAL ENERGY CONSUMPTION, States and Territories

	1989-90 PJ	2006-07 PJ	Change %
NSW(a)	1 230.4	1 529.0	24.3
Vic	1 099.8	1 463.4	33.1
Qld	691.8	1 308.9	89.2
SA	301.9	317.2	5.1
WA	473.0	916.0	93.7
Tas	96.6	125.9	30.3
NT	52.5	109.3	108.2
Australia	3 945.9	5 769.8	46.2

(a) Includes ACT

Source: ABARE Energy Update 2008, Tables C1 to C8

POPULATION AND ECONOMIC GROWTH

Change in population, measured by Estimated Resident Population (ERP) is a factor that may affect TEC. South Australia's small increase in TEC could in part be attributed to South Australia having the smallest ERP increase (10.6%) of the mainland states over the period June 1990 to June 2007. The national increase in ERP was 23.1% over this period, with Queensland (44.2%) and Western Australia (30.6%) showing the greatest increases of all the states and territories.

Change in the level of economic activity, measured by Gross Domestic Product (GDP) for Australia and Gross State Product (GSP) for the States and Territories, is another factor affecting TEC. Between 1989-90 and 2006-07, Australia's GDP in chain volume terms increased by 71.9%, while South Australia's chain volume GSP increased by 46.8%, Queensland's by 109.0 % and Western Australia's by 106.7%.

When the average annual changes in TEC and GSP or GDP between 1990-91 and 2006-07 are compared, the South Australian measures of 0.3% and 2.3% respectively are the smallest of all the states and territories. South Australia's average annual change in population was also below the national average, and the smallest of all states except Tasmania. By comparison, Western Australia, with the highest average annual increase in energy demand (TEC) of 4.0% for the period, had greater than national average changes in population (1.6%) and GSP (4.4%).

AVERAGE ANNUAL CHANGE IN TEC, ERP AND GSP^(a) - 1990-91 to 2006-07

	TEC %	ERP ^(b) %	GSP %
NSW(c)	1.3	1.0	2.8
Vic	1.7	1.0	2.9
Qld	3.8	2.2	4.4
SA	0.3	0.6	2.3
WA	4.0	1.6	4.4
Tas	1.6	0.4	2.4
NT	4.5	1.6	3.3
Australia	2.3	1.2	(d)3.2

(a) Average annual change calculated as the mean of the annual changes

(b) For ERP, the average annual change refers to the period from June 1991 to June 2007.

(c) Includes ACT

(d) Gross Domestic Product

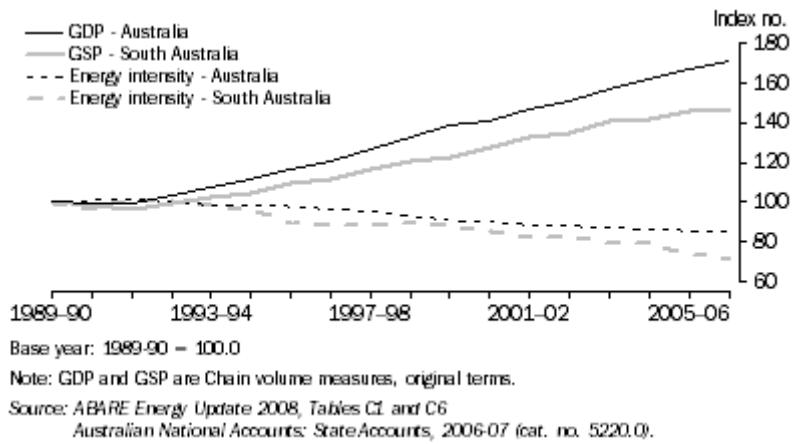
Source: ABARE Energy Update 2008, Tables C1 to C8; Australian National Accounts: State Accounts, 2006-07 (cat. no. 5220.0); Australian Demographic Statistics, Dec 2007 (cat. no. 3101.0)

ENERGY INTENSITY

Another indicator related to energy consumption is energy intensity, which is the amount of energy input required to produce a unit of output. Gross State Product and Gross Domestic Product provide measures of economic output, and TEC provides a measure of energy input, so that energy intensity can be measured as the ratio of TEC to GSP or GDP.

Energy intensity in South Australia and Australia steadily declined from 1989-90 to 2006-07, with South Australia showing the greatest decrease (28.4%) of all the states and territories. Negative changes mean that the rate of growth of the economy is greater than the rate of growth of the total energy consumption, implying that energy is being used more efficiently and/or economic activity is shifting away from energy intensive activities (ABARE 2008). The Northern Territory was the only state or territory with an increase in energy intensity over this period, indicating energy consumption was growing faster than GSP.

ENERGY INTENSITY, GSP AND GDP



ENERGY CONSUMPTION BY INDUSTRY

One of the factors affecting energy intensity is the profile of industries that make up the economy, or the structure of the economy. If there is a bias towards industries that require high energy inputs to produce a unit of output (i.e. energy intensive industries) then energy intensity will be high. The most energy intensive ANZSIC divisions in Australia are Mining and Manufacturing, where iron and steel manufacturing, alumina production and primary aluminium production are particularly energy intensive industries.

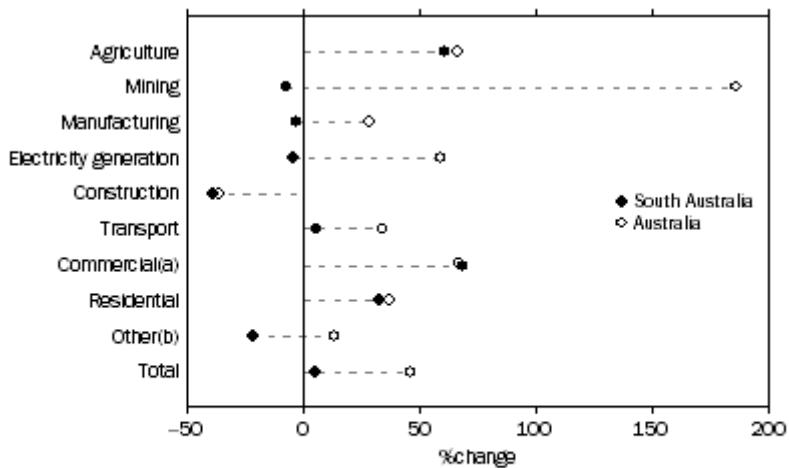
The Mining industry in South Australia showed a 7.2% decrease in TEC between 1989-90 and 2006-07, while nationally the industry increased its consumption by 185.6%. The national increase was driven by Queensland, Western Australia and the Northern Territory which all had considerable expansion of their mining industries between 1989-90 and 2006-07 (ABARE 2007, 2008).

The TEC of South Australia's Manufacturing industry decreased by 2.6% between 1989-90 and 2006-07 while nationally it increased by 28.3%. The Metal products manufacturing subdivision (which includes the high energy intensive iron and steel and non-ferrous metals manufacturing) had a 21.1% decrease in TEC in South Australia during this period, while nationally it increased 23.1% (ABARE 2008).

Low energy intensive Commercial industries and the Residential sector increased their combined share of South Australia's TEC from 12.6% in 1989-90 to 17.2% in 2006-07. Nationally these industries were responsible for 12.0% of TEC in both 1989-90 and 2006-07.

These changes in the industry mix of South Australia relative to Australia may have contributed to the state's sharper decline in energy intensity.

CHANGE IN TOTAL ENERGY CONSUMPTION - 1989-90 to 2006-07



(a) Includes ANZSIC Divisions F, G, H, J, K, L, M, N, O, P, Q and the water, sewerage and drainage

(c) Includes consumption of lubricants and greases, bitumen and solvents, as well as energy consu

Source: ABARE Energy Update 2008, Tables B1 and B6

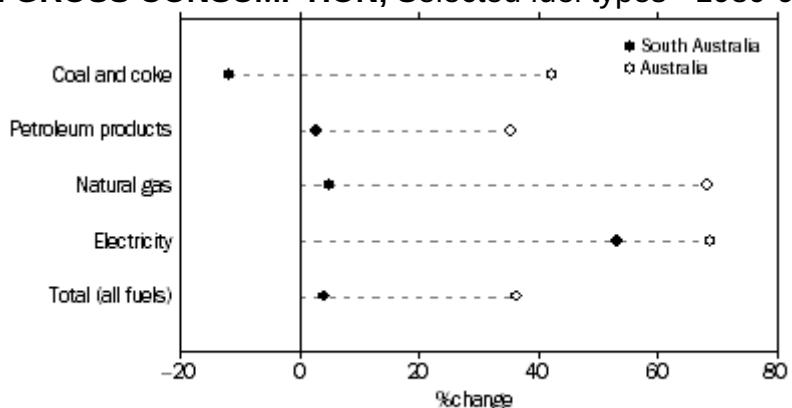
ENERGY CONSUMPTION BY FUEL TYPE

Changing to a fuel for which the available technology provides a more efficient means of delivering energy can reduce energy consumption.

South Australia's consumption of electricity increased 53% between 1989-90 and 2006-07. The state's production of thermal electricity only increased by 37.2% though, implying a net purchase of electricity from other states. In fact, for every year between 1989-90 and 2006-07, South Australia's consumption of electricity exceeded its production (ABARE 2008).

Of the main fossil fuels consumed in South Australia, the greatest increase between 1989-90 and 2006-07 occurred with natural gas (4.9%). The consumption of coal and coke in South Australia during this period fell 11.8%, largely due to the energy intensive Manufacturing division where the consumption of coal fell by 20.3% (or 7.3 PJ) (ABARE 2008). The remainder of the coal consumed in South Australia was used for electricity generation in power stations, but the change in coal consumption for this industry was a very small increase (1.2%, or 0.5PJ). Nationally, coal used to fire electricity power stations increased in usage by 60.7% over this period (ABARE 2008).

CHANGE IN GROSS CONSUMPTION, Selected fuel types - 1989-90 to 2006-07



Source: ABARE Energy Update 2008, Tables C1 and C6

SUMMARY

Smaller population and economic growth in South Australia and a shift away from energy intensive industries has contributed to a lower than national average increase in energy consumption and better than national average improvement in energy intensity. South Australia's 5.1% increase in total energy consumption between 1989-90 and 2006-07 was the lowest of the states and territories. South Australia also showed the largest decrease in energy intensity during this period.

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